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978-0-521-62509-8 - The Thread of Life: The story of Genes and Genetic Engineering

Susan Aldridge

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CAMBRIDGE UNIVERSITY PRESS

Cambridge, New York, Melbourne, Madrid, Cape Town, Singapore, São Paulo, Delhi

Cambridge University Press

The Edinburgh Building, Cambridge CB2 8RU, UK

Published in the United States of America by Cambridge University Press, New York

www.cambridge.org

Information on this title: www.cambridge.org/9780521465427

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First published 1996

Canto edition 1998

Reprinted 2000

A catalogue record for this publication is available from the British Library

Library of Congress Cataloguing in Publication data

Aldridge, Susan.

The thread of life: the story of genes and genetic engineering / Susan Aldridge.

p. cm.

Includes bibliographical references and index.

ISBN 0 521 46542 7

1. Genetic engineering. 2. Genetics. 3. DNA. 4. Biotechnology.

I. Title

QH442.A43 1996

575.1*0724—dc20 95-7354 CIP

ISBN 978-0-521-46542-7 hardback

ISBN 978-0-521-62509-8 paperback

Transferred to digital printing 2008

Cover illustration: detail from *Untitled* by Eileen Agar (1904–91). (Reproduced by courtesy of Bonhams, London/Bridgeman Art Library, London.)

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Preface

The human genome project, DNA testing, gene therapy, and genetic engineering . . . there is no shortage of news about the gene revolution. This book aims to take you behind the headlines and explore the fast-moving and fascinating world of molecular biology.

In the first part of the book, I have tried to convey the power and uniqueness of the DNA molecule: how it was discovered, what it does, and where it came from. This leads into genetic engineering and its potential. In a very real sense, there is nothing special about gene transfer – it has been going on for billions of years. Its potential comes from humans, rather than the blind forces of evolution, being at the controls. The applications of genetic engineering and related technology that have attracted the most publicity – gene testing and therapy, and transgenic animals – are considered next.

But genetic engineering is just one aspect of biotechnology (although the two terms are often used synonymously); in the third part of the book I try to look at the wider world of biotechnology, as well as that of genetic engineering – as applied to plants and the environment.

Critics say that there is an overemphasis on DNA in biology, leading to a kind of reductionism, which has alienated the public, and some scientists, from its benefits. In the last part, I have tried to put DNA in context by looking at some other new ideas that have emerged in biology over the last 20 years or so.

Susan Aldridge
London

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Acknowledgements

I am grateful to the following people for the help they have given me with this book: Professor Lynn Margulis of the University of Massachusetts and Dr Iain Cubitt of Axis Genetics for taking the time to talk to me about their work; Professor Ted Tuddenham of the Medical Research Council's Clinical Sciences Centre for providing me with an opportunity to learn about molecular genetics, and all my colleagues and friends in the lab at the CSC for five years of interesting discussions; Sandy Smith and my husband, Graham Aldridge, for reading the manuscript and making many helpful suggestions. Finally, thanks are due to Dr Robert Harington, formerly of Cambridge University Press, for his enthusiastic support at the outset of the project and Dr Tim Benton for his continuing help and guidance.

Illustration credits

Figs. 1.2(a) and (b) and 1.3(a) and (b) are modified from *Biological Science 1&2*, 2nd edition, by N. P. O. Green, G. W. Stout and D. J. Taylor, edited by R. Soper. Cambridge University Press, 1993.

Figs. 2.1, 2.2, 2.3, 4.1(a) and (b), 5.1, 7.1 and 10.1 are modified from *Biochemistry for Advanced Biology*, by Susan Aldridge. Cambridge University Press, 1994.

Fig. 3.1 is from *Gray's Anatomy*, 35th edition, edited by R. Warwick and P. Williams. Longman (London), 1973.